

Problems and Exercises

System Vision Document

1. Read this description and then make a list of expected business benefits that the company might derive from a new system:

Especially for You Jewelers is a small jewelry company in a college town. Over the last couple of years, it has experienced a tremendous increase in its business. However, its financial performance hasn't kept pace with its growth. The current system, which is partly manual and partly automated, doesn't track accounts receivables sufficiently, and the company is finding it difficult to determine why the receivables are so high. It runs frequent specials to attract customers, but it has no idea whether these are profitable or if the benefit—if there is one—comes from associated sales. Especially for You wants to increase repeat sales to its existing customers, thus it needs to develop a customer database. It also wants to install a new direct sales and accounting system to help solve these problems.

2. Read this narrative and then make a list of system capabilities for the company:

The new direct sales and accounting system for Especially for You Jewelers will be an important element in the growth and success of the jewelry company. The direct sales portion needs to track every sale and be able to link to the inventory system for cost data to provide a daily profit and loss report. The customer database needs to be able to produce purchase histories to assist management in preparing special mailings and special sales to existing customers. Detailed credit balances and aged accounts for each customer would help solve the problem with the high balance of accounts receivables. Special notice letters and credit history reports would help management reduce accounts receivable.

3. Develop a System Vision Document for Especially for You Jewelers based on the work you did for Problem 1 and Problem 2.

Cost/Benefit Analysis

5. Develop a six-year NPV spreadsheet similar to the one shown in Figure 11-11. Use the following table of benefits, costs, and discount factors (see the slides for a Cost/Benefit Analysis table). The development costs for the system were \$225,000.

Year	Annual benefits	Annual operating costs	6% discount factor
1	\$55,000	\$5,000	0.9524
2	\$60,000	\$5,000	0.9070
3	\$70,000	\$5,500	0.8638
4	\$75,000	\$5,500	0.7835
5	\$80,000	\$7,000	0.7835
6	\$80,000	\$8,000	0.7462

WBS and Gantt Chart

4. The following table presents a list of tasks for a student who wants to have an international experience by attending a university abroad. It is essentially a Work Breakdown Structure (WBS). Assuming that all predecessor tasks must finish before the succeeding task can begin (the simplest version), we include the dependence information in the table.

Use MS Project to create a Gantt chart for this WBS.

Task Id	Description	Duration (days)	Predecessor task
Application tasks			
1	Obtain forms from the international exchange office.	1	None
2	Fill out and send in the foreign university application.	3	1
3	Receive approval from the foreign university.	21	2
4	Apply for the scholarship.	3	2
5	Receive notice of approval for the scholarship.	30	4
Preparation tasks			
6	Arrange financing.	5	3,5
7	Arrange for housing in a dormitory.	25	6
8	Obtain a passport and the required visa.	35	6
9	Send preregistration forms to the university.	2	8
10	Make travel arrangements.	1	7,9
11	Determine clothing requirements and go shopping.	10	10
Travel tasks			
12	Pack and make final arrangements to leave.	3	11
13	Travel.	1	12
Arrival tasks			
14	Move into the dormitory.	1	13
15	Finalize registration for classes and other university paperwork.	2	14
16	Begin classes.	1	15